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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/764,758	01/26/2004	Terence Charles Hughes	102881-8	8744
27389	7590	11/17/2004		
NORRIS, MCLAUGHLIN & MARCUS				
875 THIRD AVE				
18TH FLOOR				
NEW YORK, NY 10022				
			EXAMINER	
			ANTHONY, JOSEPH DAVID	
			ART UNIT	PAPER NUMBER
			1714	

DATE MAILED: 11/17/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/764,758

Applicant(s)

HUGHES, TERENCE CHARLES

Examiner

Joseph D. Anthony

Art Unit

1714

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-27 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-27 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date ____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: ____.

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claim 17 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claim 17, line 2, the second occurrence of the word "hydroxylamine" seems to be in error. Should it be -hydroxamate--?

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 1-27 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Wang et al. U.S. Patent number 4,871,466.

Wang et al teach a method for the production of 6-22 carbon atoms alkyl or alkaryl hydroxamic acids and/or salts wherein a C.sub.8 -C.sub.22 alcohol is employed with water as the solvent is disclosed as well as the resultant salt and/or acid solutions per se and their use in the froth flotation of non-sulfide minerals, preferably clay, see abstract and column 2, lines 60 to column 3, line 9. The concentration of water in the final hydroxamate salt product can vary from about 30-50%, see column 4, lines 55-59. Only Applicant's claims 1-9, 15 and 18-27 are deemed to be anticipated over Examples I-III and XV-XIX of Wang et al wherein alkaline aqueous-alcoholic solutions comprising sodium alkyl hydroxamate are produced and subsequently used in a froth flotation of kaolin clay.

All of Applicant's claims 1-27 are deemed to be anticipated over the various Russian works that describe methods for making sodium alkyl hydroxamates in non-alcohol containing aqueous alkaline media as set forth in Wang et al's "Background Of The Invention" section, see column 1, line 59 to column 2, line 36, and Comparative Examples G and H in Table I

wherein Sodium octyl hydroxamates and C8-C10 hydroxamate are produced according to the Soviet (i.e. Russian teaching) and are used in a process for froth flotation of kaolin clay.

In the alternative applicant's claims may differ from Wang et al's invention and the Russian prior-art inventions in that it is somewhat unclear just what the pH range is of the aqueous hydroxamate salt compositions are prior to their addition to the froth flotation process. The examiner holds that given the concentration amounts of sodium hydroxide used in the examples and suggested in the broad disclosure of the patent, applicant's claimed pH concentration ranges would be obvious and are thus well within the skill of the ordinary artisan in the art. Furthermore, applicant's particular froth flotation steps as set forth in claim 19 are not only broadly disclosed by the Wang et al patent, but are deemed to be notoriously well known froth flotation steps in the prior-art and can thus not be considered new or unobvious.

6. Claims 1-27 are rejected under 35 U.S.C. 102(e) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Rothenberg et al. U.S. Patent Number 6,145,667.

Rothenberg et al. teach collector compositions of a mixture of a C.sub.6 to C.sub.22 fatty hydroxamic acid and an oil for use in the removal of impurities from mineral ores by the froth flotation method. The collectors are prepared by reacting an ester of a C.sub.6 to C.sub.22 fatty acid with a hydroxylamine salt

and a base in the presence of an oil and water to produce an alkyl hydroxamate salt; acidifying the alkyl hydroxamate salt, forming an organic layer and an aqueous layer, wherein the organic layer contains a C.sub.6 to C.sub.22 fatty hydroxamic acid substantially free of starting esters and hydrolysis and transesterification products of the ester; and separating the organic layer from the aqueous layer to provide a collector composition of the C.sub.6 to C.sub.22 fatty hydroxamic acid and the oil, see abstract. Only applicant's claims 1-9, 15 and 18-27 are deemed to be anticipated over Examples 1-29.

All of Applicant's claims 1-27 are deemed to be anticipated over the various Russian works that describe methods for making sodium alkyl hydroxamates in non-alcohol containing aqueous alkaline media as set forth in Rothenberg et al et al's "Background Of The Invention" section, see column 1, line 54 to column 2, line 34, and Comparative Example B, (according to the Russian Patent 513,970) wherein a sodium fatty hydroxamates are produced in an alcohol-free alkaline aqueous medium, prior to the acidification step, and are used in a process for froth flotation.

In the alternative applicant's claims may differ from Rothenberg et al's invention and the Russian prior-art inventions in that it is somewhat unclear just what the pH range is of the aqueous hydroxamate salt compositions are prior to their addition to the froth flotation process. The examiner holds that given the concentration amounts of sodium hydroxide used in the examples and suggested in the broad disclosure of the patent, applicant's claimed pH concentration

ranges would be obvious and are thus well within the skill of the ordinary artisan in the art. Furthermore, applicant's particular froth flotation steps as set forth in claim 19 are not only broadly disclosed by the Rothenberg et al patent, but are deemed to be notoriously well known froth flotation steps in the prior-art and can thus not be considered new or unobvious.

7. Claims 1-9, 15 and 18-27 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Nagaraj U.S. Patent number 5,126,038.

Nagaraj teaches collector compositions for use in froth flotation slurry processes for the beneficiation of precious metals i.e. gold, silver and platinum group metals (PGM) from sulfide ores containing especially pyrrite and pyrrhotite are disclosed. The collector comprises alkyl hydroxamic acids or their alkali metal or ammonium salts, preferably in combination with standard sulfide ore collectors such as xanthates etc. in an alkaline aqueous-alcohol medium, see abstract. The concentration of water in the final aqueous-alcohol hydroxamate salt product medium can vary from about 30-50%, see column 3, lines 41-48. Applicant's claims are deemed to be anticipated over Examples 1-4.

In the alternative applicant's claims may differ from Nagaraj's invention in that it is somewhat unclear just what the pH range is of the aqueous hydroxamate salt compositions are prior to their addition to the froth flotation process. The examiner holds that given the concentration amounts of sodium

hydroxide used in the examples and suggested in the broad disclosure of the patent, applicant's claimed pH concentration ranges would be obvious and are thus well within the skill of the ordinary artisan in the art. Furthermore, applicant's particular froth flotation steps as set forth in claim 19 are not only broadly disclosed by the Nagaraj et al patent, but are deemed to be notoriously well known froth flotation steps in the prior-art and can thus not be considered new or unobvious.

8. Claims 1-13 and 17 rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Rule U.S. Patent Number 4,324,654.

Rule teaches the use of a combination of chelating agents of formula I and II for recovering copper from ores containing copper as atacamite/paratacamite comprises generally the steps of

- (a) preparing an aqueous slurry of the ore,
- (b) adjusting the pH of the slurry to the desired value within 6 to 12,
- (c) adding to the slurry a first chelating agent represented by Formula I (i.e. alkali metal salts of hydroxamate) and a second chelating agent represented by Formula II above,
- (d) adding a frothing agent,
- (e) agitating the mixture to form a froth containing the copper,
- (f) removing the froth, and

(g) recovering the floated copper from the froth, see abstract, column 2, lines 60-68, column 3, lines 14-58 and the claims. Applicant's claims are deemed to be anticipated over Examples 1-3 even though it appears from the examples that the chelating agents of Formula I (i.e. potassium octylhydroxamate) is added as a powder instead of within an aqueous alkaline solution. The examiner holds that when the powder potassium octylhydroxamate is added to the alkaline aqueous froth flotation slurry, all of the limitations of applicant's claims are met. Applicant's use of the word 'including' in independent claim 1 opens the claims up to all the additional components found with the froth flotation slurry as taught by the Rule patent.

In the alternative applicant's claims may differ from Rule's invention in that the pH of the aqueous froth flotation slurry into which the powder octyl hydroxamate potassium salt is added, as set forth in Examples 1-3, is less than applicant's claimed range. Nevertheless, since the patent directly discloses that the pH of the aqueous froth flotation slurries can be from 6 to 12, such is deemed to be very strong motivation to actually make froth flotation slurries that are within applicant's claimed pH range.

Foreign Priority/Oath/Declaration

9. Acknowledgment is made of applicant's claim for foreign priority, as set forth in The "Combined Declaration & Power of Attorney" based on Australia PCT/AU02/00920 filed in Australia on 07/27/2001. It is noted, however, that applicant has not filed a

certified copy of said foreign application as required by 35 U.S.C. 119(b). Furthermore, the Patent Office's BIBDATASHEET has the claim to Foreign Priority to Australia PCT/US02/00994 filed 07/27/2001, which is different from applicant's foreign priority document number as listed in the "Combined Declaration & Power of Attorney". In fact the Patent Office's BIBDATASHEET list of the claim to Foreign Priority would be in error if true since it is the same document number as the Continuation Data that applicant is claiming. Would applicant thus confirm in the next response the document number that applicant wants to claimed foreign priority to. Would applicant also please supply the office with a certified copy of said document. In addition applicant needs to insert a continuation data section into the specification to clearly state that the present application is a continuation of PCT/US02/00994 filed 07/27/2001 which is now abandoned.

Prior-Art Cited But Not Applied

10. Any prior-art reference which is cited on FORM PTO-892 but not applied, is cited only to show the general state of the prior-art at the time of applicant's invention.

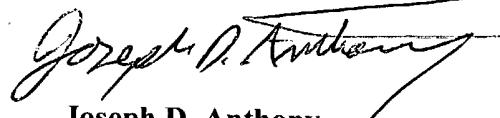
Examiner Information

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Examiner Joseph D. Anthony whose telephone number is (571) 272-1117. If attempts to reach the examiner are unsuccessful, the examiner's

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supervisor, Vasu Jagannathan, can be reached on (571) 272-1119. The centralized FAX machine number is (703) 872-9306. All other papers received by FAX will be treated as Official communications and cannot be immediately handled by the Examiner.



Joseph D. Anthony
Primary Patent Examiner
Art Unit 1714

11/13/04